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AMENDMENT TO THE CLAIMS

1. (currently amended) A computer implemented method for placing feathers on a surface, comprising:

    establishing a plurality of vertices on a surface;

    establishing a growing direction for each of the plurality of vertices on the surface;

    placing feathers on the surface based on the plurality of vertices and the growing direction;

    receiving a shape of each feather;

    automatically detecting collisions between adjacent feathers based on the shape of each feather; and

    automatically adjusting the respective growing directions of the feathers by rotating the feathers with respect to their vertices such that the respective shape of each feather does not collide with the shape of an adjacent feather.

2. (original) The method of claim 1 wherein placing further comprises placing key feathers at selected vertices and interpolating to place other feathers on the surface between the selected vertices.

3. (original) The method of claim 1 wherein placing further comprises recursively placing the feathers on the surface based on the growing direction.

4. (previously presented) The method of claim 1 wherein the shape is defined by a rachis, a left curve and a right curve.

5. (original) The method of claim 1 wherein the plurality of vertices form similarly shaped polygons and wherein establishing includes evenly distributing the plurality of vertices over the surface.

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6. (original) The method of claim 1 wherein establishing includes establishing vertices over a body of a bird.

7. (original) The method of claim 1 wherein establishing includes establishing vertices over a wing skeleton.

8. (original) The method of claim 1 wherein establishing includes establishing vertices over a tail skeleton.

9. (original) The method of claim 1 and further comprising re-tiling the surface so the vertices are evenly distributed.

10. (currently amended) A method for placing feathers on a surface, comprising:

establishing a plurality of vertices on a surface, each vertex having a growing direction; and

performing a recursive algorithm to place a feather at each vertex, comprising:

finding a growing direction for vertices in the growing direction of the vertex;

receiving a shape of the feather;

if the shape of the feather at the vertex collides with a shape of an adjacent feather, then automatically adjusting the growing direction of the vertex by rotating the feather with respect to the vertex until there is no collision between the shape of the feather and said shape of the adjacent feather.

11. (previously presented) The method of claim 10 wherein the shape of the feather is defined by a rachis, a left curve and a right curve.

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12. (original) The method of claim 10 wherein the plurality of vertices form similarly shaped polygons and wherein establishing includes evenly distributed the plurality of vertices over the surface.

13. (original) The method of claim 10 wherein establishing includes establishing the plurality of vertices over a body of a bird.

14. (original) The method of claim 10 wherein establishing includes establishing the plurality of vertices over a wing skeleton.

15. (original) The method of claim 10 wherein establishing includes establishing the plurality of vertices over a tail skeleton.

16. (original) The method of claim 10 and further comprising re-tiling the surface so the vertices are evenly distributed.